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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,806	12/05/2000	Rolf Gunter Erich Stegelmann	9223	9261

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EXAMINER

RIMELL, SAMUEL G

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

3

Office Action Summary

Application No.

09/729,806

Applicant(s)

STEGELMANN, ROLF GUNTER
ERICH

Examiner

Sam Rimell

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-29 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.


SAM RIMELL
PRIMARY EXAMINER**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2175

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5, 7, 17, 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4: The phrase “the same row identifier” lacks antecedent basis because the previous claims in the chain of dependency make no mention of a row identifier.

Claims 5 and 7: Depend from claim 4.

Claim 17: The phrase “return a row to return” is confusing.

Claims 22 and 23: Reference is made to “returning the second row” and “returning the first row”, although no method step is ever recited for removing those rows, thus rendering these claims confusing.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 and 17-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Lomet (U.S. Patent 5,933,838).

Claim 1: Lomet discloses a database system (line 1 of abstract) which includes storage devices (56, 58 in FIG. 3). The cache manager in ⁶⁶~~56~~ in FIG. 3) is further detailed in FIG. 11, and includes a table (122) having a plurality of rows (124, 126). Each row includes a data structure (128, 130). The first row (130) contains data presenting a “before image” and the

second row (128) contains data representing an “after image”. This occurs because the first row has a lower state identifier value (SID) than the second row. The lower number state identifier represents that a transaction on the object, such as a logging operation, occurred sequentially before a transaction on an object having the higher number (see col. 33, lines 56-60).

Claim 2: Each row (130, 128 in FIG. 11) includes state identifiers (“SID” in FIG. 11).

Claim 3: The state identifiers (SID) are in the table (122) of FIG. 11.

Claim 4: The first row (130) and the second row (128) have a row identifier (object ID). The first and second rows are associated, once being a successor object, the other being a predecessor object.

Claim 5: The rows contain state identifiers (SID) to indicate “before” and “after” states as explained in claim 1.

Claim 6: Data modification operations can be performed, such as read and write operations (FIG. 11). The operations are requests, such as a request to read data or a request to write data. As stated with respect to claim 1, the first row contains data representing a “before” image. Additional rows, such as a third row, may be provided having the same “before” image, as indicated by the lower SID value of “1”.

Claim 7: Col. 33, lines 56-60 indicate that the state of each row corresponds to a log number recorded in a log, which is separate from the table (120). The recording of this data in a log is considered to be a transitioning of the data, based on a command to manipulate the data by recording it in the log.

Claims 8-9: Any loading of data into the rows (128, 130) is considered to be a return of data to those rows. The processing system which loads the data into these rows is therefore the

Art Unit: 2175

module which returns the data. Data can be returned to the rows during a normal read request, which would cause the SID to be altered. If an abort occurs, data can be returned to the rows from the log record (col. 33, lines 27-29).

Claim 10: The processor includes programming to mark the first row with a state identification. This programming reads as a module which marks the first row as a current image.

Claim 11: The processor includes programming which can flush the data from the rows of the table. (col. 33, line 28). The flushing can occur in response to an abort condition, such as after the abort condition has occurred and recovery has been completed.

Claim 12: The table (122 in FIG. 11) includes row identifiers (object ID) associated with the first and second rows, a first state identifier (SID) associated with the first row and a second state identifier (SID) associated with the second row.

Claim 13: The table (120) further includes a mutation identifier (dirty flag). The intended usage of the flag (i.e. what the flag indicates) does not limit the structure of the system and thus carries no patentable weight. Each of the mutation identifiers are associated with the row identifiers (object ID).

Claim 14: The mutation identifier (dirty flag) is a bit which is changed by processing operations. The bit changes between "1" and "0".

Claim 17: Although it is not understood what is meant by the phrase "return a row to return", as best as can be understood, this claim is suggesting some return of data to the rows. As stated with respect to claims 8 and 9 above, any loading of data to the rows (128, 130) is considered to be a return of data to those rows.

Claim 18: The presence of even one mutation identifier (dirty flag) is considered to be a “list” of such identifiers. This interpretation is confirmed by the claim, which defines the “list” as having as few as one item. The intended usage of the flag to indicate active operations does not limit the structure of the system and thus carries no patentable weight.

Claim 19: The presence of even one mutation identifier (dirty flag) is considered to be a “list” of such identifiers. The intended usage of the flag to indicate an abort operation does not limit the structure of the system and thus carries no patentable weight.

Claim 20: FIG. 11 illustrates the storage of objects (128 and 130) in the rows (124) and (126) respectively. In response to processing operations, such as logging operations, a state identifier (SID) is assigned to each object (128, 130). The state identifiers are indicators of a sequence in the log (col. 33, lines 56-60). Thus, a lower SID number represents that a transaction on the object occurred before the transaction on the object having the higher SID. Accordingly, the object with the lower SID is the “before” image and the object with the higher SID is the “after” image.

Claim 21: The state identifiers (SID) are associated with each row (122) and (126) and indicate whether the row contains the “before” image data or the “after” image data.

Claim 22: Any loading of data to the rows is readable as a return of data to that row under a condition.

Claim 23: See remarks for claims 8-9.

Claim 24: See remarks for claim 10.

Claim 25: Claim 25 presents two optional operations, only one of which limits the claims. See remarks for claim 11 in reference to the deleting operation.

Art Unit: 2175

Claim 26: The identification of a state identifier to the second row (128) is considered to be a marking of that row.

Claim 27: Claim 27 presents two optional operations, only one of which limits the claims. See remarks for claim 11 in reference to deleting rows.

Claims 28-29: See remarks for claim 1.

Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Sam Rimell at telephone number (703) 306-5626.



Sam Rimell
Primary Examiner
Art Unit 2175